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                                                                                                                                                           This sequence encodes the human LEA (late embryogenesis abundant)-motif protein (HuLEAP) of the invention. Cells containing the DNA are used to produce recombinant HuLEAP HULEAP and its agonists (optionally expressed from gene therapy vectors) are used to treat disorders that involve abnormal cellular differentiation or growth, e.g. hypoaldosteronism, Addison's disease, hypothyroidism, colorectal polyps, gastric and duodenal ulcers, haematopoietic, lymphoid or many other forms of cancer. Attagonists of HuLEAP, e.g. Ab, antisense or untranslatable sense sequences or ribozymes, are used to induce cell proliferation, particularly in tissues that do not regenerate under normal conditions, vitro stimulation of skin growth for grafting. Ab can be used as an ancaptist, as carrier to deliver agents to HuLEAP-expressing calls, as immunoassay for diagnostical detection of HuLEAP, in competitive drug screens and to purify HuLEAP from natural sources. Fragments of the DNA can be used diagnostically (in hybridisation or amplification tests), for mapping genomic sequences and in drug screening.
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                                                                               New human late embryogenesis abundant-like protein - useful to disordered cell proliferation and growth, or to induce tissue
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                                                                                                                                      Claim 1; Fig 1; 57pp; English.
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Best Local Similarity 100.
Matches 858; Conservative
                                      WPI; 1998-447238/38.
P-PSDB; AAW61538.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         identified using the method can be used for ascertaining the suitability of an anti-neoplastic drug candidate for efficacy in treating a malignancy. The method can be used in the diagnosis of many types of cancers, including cancers of the breast, prostate, colon and lung. It may also be used for diagnosis and treatment of brain cancers, including
                                                                                                                                                                                                                                                                                                                                                                                                                   GITTGTGTAGCCAGTCTACCACCACCACACACCCCCCGGACACACAGGCTTAGGCCCCTCTG
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GACTATGAAGGGTTTTGAATATATCTTGGCTAAGCTGCAAGGCGAGGCCCCTTCCAAAAC
                                                                                                            GACTATGAAGGGTTTTGAATATATCTTGGCTAAGCTGCAAGGCGAAGGCCCCTTCCAAAAC
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                                                                                                                                                                                                                                                                                         Nucleotide sequence of the gene insert of CINN 1.
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Gene #613 used to Bovine embryonic g Human ovarian tumo

Human ovarian tumo Human ovarian PCR-

Bovine embryonic g Bovine EST associa

Bovine embryonic g Drosophila melanog Drosophila melanog

DNA encoding

EST clone D14. Ho Bovine EST associa

Drosophila melanog Drosophila melanog Aspergillus oryzae Spider silk protei Drosophila melanog Mouse E2A-binding

Drosophila melanog Mouse OSF-5 coding Human polynucleoti

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Nucleotide sequenc Drosophila melanog Drosophila melanog Drosophila melanog

Human polynucleoti Human gene express Human oxidoreducta

Human cancer cell

Gastric cancer ass Gastric cancer ass Human gene express Human gene express

Title: Perfect score:

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Scoring table:

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LEA-motif developmental protein; human; HuLEAP; tissue regeneration; abnormal cellular differentiation; hypoaldosteronism; Addison's disease; hypotyroidism; colorectal polyps; duodenal ulcer; cancer; therapy; late embryogenesis abundant protein; cell proliferation induction; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                              Human LEA-motif developmental protein coding sequence.
                                                                                                                                                                                                                                                                                                                                            ALIGNMENTS
                                                                    AAS73954
ABL04817
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/product= HuLEAP
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Human bone marrow
Human colon cancer
DNA encoding novel
Human bone marrow
DNA encoding novel
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                                                   9, 2003, 10:32:57; Search time 326 Seconds (without alignments) 7104.656 Million cell updates/sec
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                                                                                                                                                                                                                                                                     |SIDS1/gcgdata/genesedy/genesedn-emb1/NA2001A.DAT:*
|SIDS1/gcgdata/genesedy/geneseqn-emb1/NA2001B.DAT:*
|SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2002.DAT:*
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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                      2552756 seqs, 1349719017 residues
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Listing first 45 summaries
                                   model
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                  protein (HulEAP) of the invention. Cells containing the DNA are used to produce recombinant HulEAP. HulEAP and its agonists (optionally expressed from gene therapy vectors) are used to treat disorders that involve abnormal callular differentiation or growth, e.g. hypoaldosteronism, addison's disease, hypothyroidism, colorectal polyps, gastric and Addison's disease, hypothyroidism, colorectal polyps, gastric and Antagonists of HulEAP, e.g. Ab, antiseanse or untranalatable sense sequences or ribozymes, are used to induce cell proliferation, particularly in tissues that do not regenerate under normal conditions, e.g. in cases or trauma or degenerative diseases, and for in vivo/in antagonist, as carrier to deliver agents to HulEAP, expressing cells, as immunoassay for (diagnostic) detection of HulEAP, in competitive drug screens and to purify HulEAP from natural sources. Fragments of the DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  used diagnostically (in hybridisation or amplification tests), for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RMPRWAERLFPANVAHSVYVLEDSIVDPQNQTWTTFTWNINHARLMVVEERCVYCVNSDN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SGWTEIRREAWVSSSLFGVSRAVQEFGLARFKSNVTKTMKGFEYILAKLQGEAPSKTLVE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SGWTEIRREAWVSSSLFGVSRAVQEFGLARFKSNVTKTMKGFEYILAKLQGEAPSKTLVE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MVKYFLGQSVLRSSWDQVFAAFWQRYPNPYSKHVLTEDIVHREVTPDOKLLSRRLLIKTN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MVKYFLGGSVLRSSWDQVFAAFWQRYPNPYSKHVLTEDIVHREVTPDQKLLSRRLLTKTN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RMPRWAERLFPANVAHSVYVLEDSIVDPQNQTMTTFTWNINHARLMVVEERCVYCVNSDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Gaps
New human late embryogenesis abundant-like protein - useful to treat disordered cell proliferation and growth, or to induce tissue
                                                                                                                                                              This sequence is the human LEA (late embryogenesis abundant) -motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; chromosome mapping; gene mapping; gene therapy; forensic; food supplement; medical imaging; diagnostic; genetic disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 1130; DB 19; Length 219; 100.0%; Pred. No. 1.5e-106; ive 0; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TAKEAKEKAKETALAATEKAKDLASKAATKKQQQQQFV 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAKEAKEKAKETALAATEKAKDLASKAATKKQQQQQFV 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mapping genomic sequences and in drug screening
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel human diagnostic protein #9757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABG09766 standard; Protein; 167 AA
                                                                                                        Claim 5; Fig 1; 57pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   31-MAR-2000; 2000US-0540217.
23-AUG-2000; 2000US-0649167.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13-FEB-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ouery Match
Best Local Similarity 100.
Matches 219; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          219 AA;
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The invention relates to isolated polynucleotide (I) and polypeptide (II) sequences. (I) is useful as hybridisation probes, polymerase chain reaction (PCR) primers, oligomers, and for chromosome and gene mapping, and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving to restore normal activity of (II) or to treat disease states involving dantificating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating disorders involving aberrant protein expression or biological activity. The polypeptide and polynucleotide sequences have applications in diagnostics, forensics, gene mapping, identification of mutations cresponable for genetic disorders or other traits to assess biodiversity and to produce other types of data and products dependent on DNA and amino acid sequences. ABG00010-ABG30377 represent novel human caid sequence data for this patent did not appear in the printed specification, but was obtained in electronic format directly from WIPO cut they wipo int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 RMPRWAERLFPANVAHSVYVLEDSIVDPQNQTMTTFTWNINHARLMVVEERCVYCVNSDN 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            antiparkinsonian, neuroprotective, nootropic, haemostatic, osteopathic, antidier; fungicide, antidiabetic; antidasthmatic; antidallergic; immunostimulant; analgesic; cerebroprotective; antianaemic; infection; nervous system disorder; autoimmune disorder; inflammation; allergy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             antiinflammatory; antibacterial; immunosuppressive; vasotropic; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess biodiversity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 47;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         64.3%; Score 726.5; DB 22; Length
69.6%; Pred. No. 1.1e-65;
.ive 8; Mismatches 10; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               214
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                                                                                                                                                                                                                                                                                   Claim 20; SEQ ID No 40125; 103pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ä
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Matches 149; Conservative
2001-639362/73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         167 AA;
                                     N-PSDB; AAS73953
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Human ORFX protein Human polypeptide

Angiogenesis-assoc

Arabidopsis thalia Arabidopsis thalia

Novel human diagno

Human lipid-associ Drosophila melanog Human FLEXHT-45 pr Arabidopsis thalia Human NuMA protein Novel human diagno Novel human diagno Zuotin. Saccharom

Human secreted pro Candida albicans S

Novel human diagno

S cerevisiae apopt Sequence of the in Nuclear mitotic ap

Human zuotin prote

Aspergillus fumiga Human novel cytoki

Novel human secret

Aspergillus fumiga

Drosophila melanog Listeria monocytog Polyketide synthas Drosophila melanog

OM protein

Run on:

Sequence:

Searched:

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LEA-motif developmental protein; human; HuLEAP; tissue regeneration; abnormal cellular differentiation; hypoaldosteronism; Addison's disease; hypothyroidism; colorectal polyps; duodenal ulcer; cancer; therapy; late embryogenesis abundant protein; cell proliferation induction.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human LEA-motif developmental protein.
                                                                                       AAE34445
ABB64495
AAB36623
AAG20424
                                                              ABP69539
ABU03523
                                                                                                                                                                                                                                                               AAR47173
AAG65799
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ABB48773
                                                                                                                                                                                    AAY49936
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 05-FEB-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-OCT-1998
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                                                                                                                                                                                    148
143
142.5
139.5
137
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 ; Search time 73 Seconds
(without alignments)
476.180 Million cell updates/sec
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                                                                                                                                                                                                                                                                                                                                                                              A Geneseq 19Jun03:*

| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1980.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA41981.DAT:*
| SIDS1/gcgdata/geneseqfy-embl/AA41981.DAT:*
| SIDS1/gcgdata/geneseqfy-embl/AA41991.DAT:*
| SIDS1/gcgdata/geneseqfy-embl/AA41999.DAT:*
| SIDS1/gcgdata/geneseqfy-embl/AA2001.DAT:*
| SIDS1/gcgdata/geneseqfy-embl/AA2001.DAT:*
| SIDS1/gcgdata/geneseqfy-embl/AA2001.DAT:*
| SIDS1/gcgdata/geneseqfy-embl/AA2001.DAT:*
| SIDS1/gcgdata/geneseqfy-embl/AA2001.DAT:*
| SIDS1/gcgdata/geneseqfy-embleA2001.DAT:*
| SIDS1/gcgdat
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1130
1 WVKYFLGQSVLRSSWDQVFA......AKDLASKAATKKQQQQQFV 219
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               GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                         1107863 segs, 158726573 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUMMARIES
                                                                                           December 9, 2003, 12:58:13
                                                                                                                                                                                                                                                                                                                               Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                 - protein search, using sw model
                                                                                                                                                                                                 BLOSUM62
Gapop 10.0 , Gapext 0.5
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                                                                                                                                                                                                                                                                                            Minimum DB seq length: 0
Maximum DB seq length: 200000000
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Match Length
                                                                                                                                                                                                                                                                                                                                   Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score
                                                                                                                                                                                                 Scoring table:
                                                                                                                                                Title:
Perfect score:
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Database

Streptomyces roseo Drosophila melanog Human kinesin moto

970S-0796676

06-FEB-1997;

Human LEA-motif de Novel human diagno Human bone marrow Novel human diagno

Human vesicle traf Human vesicle traf Human protein sequ Drosophila melanog Novel human diagno

AAB03814 AAY49959 AAB93664

ABB12426 ABG02067

ABB59225 ABG01686

167 99 98 171 171 82 194 194

100.0 64.3 30.0 21.7 20.3 19.2 17.7

726.5 339.5 245.5 220 217.5 200.5 200.5

AAW61538

Result Š. (INCY-) INCYTE PHARM INC.

Goli SK, Hillman JL; WPI; 1998-447238/38. N-PSDB; AAV45175.

Human lipid-associ Yeast SYR2, confer

Larval viability

219

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                  MEDLINE=22388257; Pubbled=12477932;

WEDLINE=22388257; Pubbled=12477932;

Rausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

Rausberg R.D., Collins F.S., Wagner L., Shemmen C.M., Schuler G.D.,

Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A plachenco M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

Brownstein M.J., Usdin T.B., Tooshiyuki S., Carninci P., Prange C.,

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Roask S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunnarane P.H.,

Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Villalon D.K., Wuzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Ratceffeld Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

Rochnerch A., Schein J.E., Jones S.J.M., Marra M.A.,

"Generation and initial analysis of more than 15,000 full-length

broc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MVKYFLGQSVLRSSWDQVFAAFWQRYPNPYSKHVLTEDIVHREVTPDQKLLSRRLLTKTN 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match

97.2%; Score 1098; DB 1; Length 2
Best Local Similarity 98.1%; Pred. No. 3.9e-83;
Matches 211; Conservative 4; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8D909AB939B6D851 CRC64;
                                                                                                                            181 TAKEAKEKAKETALAATEKAKDLASKAATKKQQQQQFV
                                                                                                                                                                            181 TAKEAKEKAKETALAATEKAKDLASKAATKKOQQQQFV
                                                                                                                                                                                                                                                                                                                                                                               15-SEP-2003 (Rel. 42, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Px19-like protein.
Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                           217 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; BC025859; AAH25859.1; -.
InterPro; IPR006797; MSF1.
                                                                                                                                                                                                                                                                                                                                                               .5-SEP-2003 (Rel. 42, Created)
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                                                                                                                                                                                                                                                                                                           STANDARD;
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                                                                                                                                                                                                                                                                                                           PX19_MOUSE
08R107;
                                                                                                                                                                                                                                             RESULT 2
PX19_MOUSE
ID _PX19 MC
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                           à
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             Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RIDLINE-22388257; PubMed-124792;
Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RIJACHENO, E.D., Collins F.S., Wagner L., Shemmen C.M., Schuler G.D.,
Altschul S.F., Zeeberg B., Butcow K.H., Schaefer C.F., Bhat N.K.,
Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
Distchench L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
Staplecon M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hullyk S.M.,
Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hullyk S.M.,
Nilalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Nilalon D.K., Muzny D.M., Scherner E.D., Dickson M.C.,
Rodriguez S., Sanchez A.,
Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
Butterfield Y.S.N., Krzywinski M.I., Salska U., Smailus D.E.,
Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
Fucentration and initial analysis of more than 15,000 full-length
Froc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  immunocompetent organs.
-!- TISSUE SPECIFICITY: Highly expressed in fetal liver; less
expressed in fetal brain, lung, and kidney. At the adult stage,
expression is drastically reduced in the liver but highly
expressed in the spleen, brain, lung, lymph nodes and peripheral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
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R -> H (IN REF. 1).
A -> T (IN REF. 5).
MISSING (IN REF. 5).
W; CCDBF54FA573509F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    , Pred. No. 9.3e-86;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   blood leukocytes.
SIMILARITY: Contains 1 PRELI/MSF1 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GO; GO:0007275; P:development; TAS.
GO; GO:0006955; P:immune response; TAS.
TISSUE=Brain, Eye, Ovary, and Placenta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR006797; MSF1.
Pfam; PF04707; MSF1; 1.
PR0SITE; PS50904; PRELI MSF1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; AF151864; AAD34101.1; -. EMBL; AF153607; AAD41089.1; -. EMBL; AF111112; AAF27195.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; AF201925; AAF09255.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL, AF112203, AAF17191.1; --
EMBL, BC000007, AAH00007.1; --
EMBL, BC007268, AAH07268.1; --
EMBL, BC008307, AAH08307.1; --
EMBL, BC008866; AAH08866.1; --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25181 MW;
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219 AA;
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Best Local &
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Gaps

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g 8

à Dp

Length 217;

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GenCore version 5.1.6
(c) 1993 - 2003 Compugen Ltd.
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sw model - protein search, using OM protein December 9, 2003, 12:59:53 ; Search time 23 Seconds (without alignments) 447.776 Million cell updates/sec Run on:

US-09-892-316-1 1130 Title:

1 MVKYFLGQSVLRSSWDQVFA.....AKDLASKAATKKQQQQQFV 219 Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

127863 segs, 47026705 residues Searched: Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt 41:\* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

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	tion	homo sabien	mus musculu	gallus gall	saccharomyc	mus musculu	homo sapien	homo sapien	caenorhabdi	bacteriopha	rattus norv	mus musculu	saccharomyc	homo sapien	saccharomyc	vaccinia vi	homo sapien	saccharomyc	bacillus su	caenorhabdi	rhizobium m	saccharomyc	haemophilus	saccharomyc	gallus gall	haemophilus	ictalurid	pyrobaculum	vaccinia vi	erwinia chr	brassica na	zea mays (m	mycoplasma	homo canten
	Description	09v255			P35200	09cyy7		092503				060780	P40032	060861	P32527	P21052	P16591	P40965	P80862	022516	P20471	P38992	002069	P27351	P14105	P44678	200105	Q82v65	P29888	P07103	P13934	P51059	P47604	5666
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SUMMARIES	ΙD	PX19 HUMAN	PX19 MOUSE	PX19 CHICK	MSF1 YEAST	CT45 MOUSE	CT45 HUMAN	S141 HUMAN	YN02 CAEEL	VIVC_BPT7	GAS7 RAT	GAS7 MOUSE	YEN9 YEAST	GAS7 HUMAN	ZUO1 YEAST	VF11_VACCC	FER HUMAN	MSH4 YEAST	SERC_BACSU	CHD3 CAEEL	NDVB RHIME	SUR2_YEAST	TRA HAEIN	ADBI YEAST	MYH9 CHICK	TOLA HAEIN	VG22_HSVI1	RS24_PYRAE	VF11 VACCP	GUNZ ERWCH	LE76_BRANA	CAP2_MAIZE	Y364_MYCGE	MANUTE INDICA
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	° Query Match Length	219	217	215	230	195	194	715	743	747	422	421	644	412	433	354	822	878	359	1787	2832	349	687	.004	1959	372	1403	121	337	426	280	196	224	471
οA	Query	100.0	97.2	84.8	18.4	17.8	٠.	12.3			8.1	8.1		7.6			7.4			7.3				7.1	7.1	7.1	7.1	7.0	7.0	7.0	6.9	6.9	6.9	
	Score	1130	1098	958	207.5	201.5	200.5	139.5	126	107	92	91.5	06	ъ.	85.5	85	84	84	83	83	82	. 81	0	80.5	0	80	80	79.5	79	79	78.5	78.5	78	7.0
	Result No.	-	7	М	4	ഗ	9	7	8	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	23

[6] SEQUENCE FROM N.A.

Q9vufB drosophila O06501 desulfuroco Q24704 drosophila Q9455 drosophila Q94b17 mus musculu P46672 saccharomyC P08089 streptococc Q8gn12 bifidobacte P94132 acinetobacte P9413 ahizoblum P46416 arabidopsis Q87td6 vibrio para
C314_DROWE VATE_DESSY H11_DROVI H12_DROVI NBPX_MOUSE G4P1_YEAST M6_STRPY M0BA_BIFLO ETFD_ACICA ETFD_ACICA ES16_RHIME GSHB_ARATH SYR_VIBPA
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2 C C C C C C C C C C C C C C C C C C C

## ALIGNMENTS

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SEQUENCE FROM N.A.

TISSUE-Adrenal gland;

MEDLINE=20402571; PubMed=10931946;

MEDLINE=20402571; PubMed=10931946;

Gu Y.-J., Huang C.-H., Li Y.-B., Jiang C.-L., Fu G., Zhang Q.-H.,

Gu B.-M., Dai M., Mao Y.-F., Gao G.-F., Rong R., Ye M., Zhou J.,

Xu S.-H., Gu J., Shi J.-X., Jin W.-R., Zhang C.-K., Wu T.-M.,

Huang G.-Y., Chen Z., Chen M.-D., Chen J.-L.;

"Gene expression profiling in the human hypothalamus-pituitary-adrenal
axis and full-length cDNA cloning.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Guzman-Rojas L., Sime J.C., Rangel R., Guret C., Sun Y., Alcocer J.M., Martinez Valdez H.;
Martinez Valdez H.;
TYPRELT, the human homologue of the avian px19, is expressed by germinal center B lymphcoytes ";
Int. Immunol. 12:607-612(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
TISSUB-DEFRAID papilla;
Kim M.K., Kim Y.H., Seo J.M., Lee H.M., Chung H.J., Sohn M.Y.,
Hwang S.Y., Im S.U., Jung E.J., Lee J.H., Kim J.C.;
Ha S.Y., Im S.U., Jung E.J., Lee J.H., Kim J.C.;
Ha catalogue of genes in the human dermal papilla cells as identified
by expressed sequence tags.";
Submitted (MAY-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                 Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A. MEDLINE=20272150; PubMed=10810093; Lai C.-S., Lin W.-C.; Lai C.-H., Chou C.-Y., Ch'ang L.-Y., Liu C.-S., Lin W.-C.; Lidentification of novel human genes evolutionarily conserved in Caenorhabditis elegans by comparative proteomics."; Genome Res. 10:703-713(2000).
                                Q9Y255; Q9UI13; Q9UGS9; 15-SR-2003 (Rel. 42, Created) 15-SR-2003 (Rel. 42, Last sequence update) 15-SRP-2003 (Rel. 42, Last annotation update) 15-SRP-2003 (Rel. 42, Last annotation update) Px19-1ike protein (25 kDa protein of relevant evolutionary and lymphoid interest) (PRELI) (CGI-106) (SBBI12).
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Zhang W., He L., Wan T., Zhu X., Cao X.;
SUDmitted (DEC-1998) to the EMBL/GenBank/DDBJ databases.
219 AA
    PRT;
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                 MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastEEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/213,391
FILING DATE:
FILING DATE:
FILING DATE:
FILING DATE:
APPLICATION NUMBER: 08/796,676
FILING DATE:
ATTORNEY AGENT INFORMATION:
NAME: B111ngs, Lucy J.
NAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 858 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
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Best Local Similarity 100.
Matches 858; Conservative
  COMPUTER READABLE FORM
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US-09-213-391-2
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Sequence 2, Application US/09213391
Patent No. 6281190
GENERAL INFORMATION:
APPLICANT: Hillman, Jennifer L.
APPLICANT: Goli, Surya K.
TITLE OF INVENTION: HUMAN LEA-MOTIF DEVELO.
TITLE OF INVENTION: PROTEIN
NUMBER OF SEQUENCES: 3
CORRESPONDENCE ADDRESS:
ADDRESSEE: Incyte Pharmaceuticals, Inc.
STREE: CA
COUNTRY: USA
ZIP: 94304
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Sequence 1033, Ap
Sequence 14, Appl
Sequence 8560, Ap
Sequence 8582, Ap
Sequence 8662, Ap
Sequence 8662, Ap
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Sequence 2, Appli
Sequence 8, Appli
Sequence 365, Appli
Sequence 15522, A
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(without alignments)
4855.214 Million cell updates/sec
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Sequence 1, App
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(cgn2 6/ptodata/2/ina/5A COMB.seq:*

(cgn2 6/ptodata/2/ina/5B COMB.seg:*

(cgn2 6/ptodata/2/ina/6A COMB.seg:*

(cgn2 6/ptodata/2/ina/6A COMB.seq:*

(cgn2 6/ptodata/2/ina/RETOMS.seq:*

(cgn2 6/ptodata/2/ina/PCTUS COMB.seq:*

(cgn2 6/ptodata/2/ina/PCTUS COMB.seq:*
GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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US-09-438-938-8

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US-09-252-991A-15264

US-09-252-991A-15264

US-09-252-991A-15411

US-09-252-991A-15411

US-09-252-991A-15411

US-09-252-991A-15473

US-09-252-991A-8662

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Listing first 45 summaries
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Sequence 165, Appl
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Sequence 1570, Appl
Sequence 165, Appl
                                     Sequence 17,
Sequence 17,
1 US-09-060-482-1

1 US-09-007-005-17

3 US-09-144-796-17

3 US-09-13-840A-1

1 US-09-103-840A-1

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3 US-09-103-840A-1

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Sequence 2, Application US/08796676
; Sequence 2, Application US/08796676
; Patent No. 5858712
; GENERAL INFORMATION:
    APPLICANT: Hillman, Jennifer L.
    APPLICANT: Goli, Surya K.
    TITLE OF INVENTION: HUMAN LEA-MOTIF DEVELOPMENTAL
    TITLE OF INVENTION: PROTEIN
    NUMBER OF SEQUENCES: 3
    CORRESPONDENCE ADDRESS:
    ADDRESSEE: Incyte Pharmaceuticals, Inc.
    STREET: 3174 Porter Drive
    CITY: Palo Alto
    STATE: CA
    COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 858; DB 2; L
100.0%; Pred. No. 4.8e-214;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                            ZUGNATURE READABLE FORM:

MEDIUM TYPE: Diskette
COMPUTER: DISKETTE
COMPUTER: IBM COMPABLIDE
COPERATING SYSTEM: DOS
SOFTWARE: FASISEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/796,676
FILING DATE: Filed Herewith
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: BIllings, Lucy J.
REGISSTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: 36,749
REFERENCE/DOCKET NUMBER: 36,749
TELEPHONE: 415-85-055
TELEPHONE: 415-85-055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 858 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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Contact:

Insc mgc@nhgri.nih.gov
Shevchenko,Y., Wetherby,K.D., Becketrom-Sternberg,S.M.,
Berdenko,Y., Wetherby,K.D., Becketrom-Sternberg,S.M.,
Benjamin,B., Blakesley,R.W., Bouffard,G.G., Brinkley,C., Brooks,S.,
Dietrich,N.L., Gupta,J., Ho,S.-L., Karlins,E., Legaspi,R.,
Lim,M., Maduro,Q.L., Masiello,C., Mastrian,S.D., McCloskey,J.C.,
McDowell,J., Pearson,R., Snyder,B., Stantripop,S., Thomas,P.J.,
Tlongson,E.E., Touchman,T.W., Tsurgeon,C., Vogt,J.L., Walker,M.A.,
Zhang,L.-H. and Green,E.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 eccepteroreactaceactreeccecececeteres
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Clone distribution: MGC clone distribution information can be for through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAL Plate: 15 Row: d Column: 4 This clone was selected for full length sequencing because it passed the following selection criteria: Hexamer frequency ORF analysis, GenomeScan gene prediction Triteria: Recuency ORF This clone has the following problem: no 5' EST match.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Direct Submission
Submitted (07-DEC-2001) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                            816 AGAGAAGGCCAAGGACCTCGCCAGCAAGGCGGCCACCAAGAAGCAGCAGCAGCAGCAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATC
CDNA Library Parayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: National Institutes of Health Intramural
Sequencing Center (NISC),
Gaithersburg, Maryland;
Web site: http://www.nisc.nih.gov/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Eutele
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo
1 (bases 1 to 1252)
Strausberg,R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
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                                                                                                                                                                                                                                                                                                              linear
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                                                                                                                                                                                                                                                                                                            BC018904 1252 bp mRNA
Homo sapiens, clone IMAGE:3957371, mRNA.
BC018904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol type="mRNA"
/db_xref="taxon:9606"
/clone="INAGE:957371"
/tissue type="placenta, cl
/clone_lib="wIH MGC_21"
/lab_host="DH10E-R"
/note="Vector: pOTB7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
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362 g
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                                                                                                                                         BC018904.1 GI:17403027
                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (human)
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VERSION
KEYWORDS
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AUTHORS
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                                                                                                                                                                                             COT 10-NORMALIZED"
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                                                                                                                                                                                                                                                                                 /noce="1st strand cDNA was primed with a NotI-oligo(dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR V
sites of the pCMVSPORT 6 vector. Library was normalized.
302 c 307 g 211 t 5 others
                                                                                                                                                                                        /cell_type="T CELLS (JURKAT CELL LINE) COT 10-NORMALIZEI
/cell_line="JURKAT"
/clone lib="Homo sapiens T CELLS (JURKAT CELL LINE) COT
10-NORMALIZED"
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http://fulllength.invitrogen.com/ InVitroGen Corporation 1600 Faraday Avenue Genoscope sequence ID : CSODJ010CB08QP1. Location/Qualifiers
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Best Local Similarity 100.0%; Pred. No. 3.4e-202;
Matches 858; Conservative 0; Mismatches 0;
                                                                         1. .1062
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                                                                                                                      /mol_type="mRNA"
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution. SUMMARIES Query Match Length DB ALS59031 ALS59031 ALS59030 HOMO Sapi ALS59788 ALS59788 BMS49485 AGENCOURT

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BMS50706 AL583696 AL583696 BUG52861 BUG175909 BUG175909 BUG175909 BUG175909 BUG175909 BUG175909 BUG179062 BUG18096	ALIGNMENT  1062 bp c CSODJO10Y 4  ordata; Cra imates; Cat ssee J. and ries and no equence ver cquence ver ional de Se cns. France c. France c. France c. This sequ ation about ation about ns.fr/ q=CSODJ010C ang@lifetec
	sapiens T cDNA clone 11:31283164 (human) ttazoa; Chor heria; Prim or 1062) or 1062) or 1063 or 1063 or 1064 or
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	RESULT 1 ALS59031 LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM TITLE JOURNAL COMMENT

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PAT 17-0CT-2001
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100.0%; Pred. No. 4.1e-191;
ive 0; Mismatches 0;
       DNA
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| Hillman, J.L. and Goll, S.K.
| Human LBA-motif developmental protein
| Patent: US 6281190-A 2 28-AUG-2001;
| Location/Qualifiers
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OM nucleic - nucleic search, using sw model	December 9, 2003, 10:33:38 ; Search time 3494 Seconds (without alignments) 10045.924 Million cell updates/sec	US-09-892-316-2 score: 858 e: 1 GCGGTGGTGACTACGTGCCCTCCCTTCATTGTACT 858	table: IDENTITY NUC Gapop 10.0, Gapext 1.0	d: 2888711 seqs, 20454813386 residues	Total number of hits satisfying chosen parameters: 5777422	Minimum DB seq length: 0 Maximum DB seq length: 200000000	Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries
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## ALIGNMENTS

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AR028528 858 bp	Sequence 2 from patent US 5858712.	AR028528	AR028528.1 GI:5940501	•	Unknown.	Unknown.	Unclassified.	1 (bases 1 to 858)	Hillman, J.L. and Goli, S.K.	CDNA encoding a LEA-motif developmental protein homologous to avian	px19	Datent . 11S 5858712-A 2 12-JAN-1999:
RESULT 1 AR028528 LOCUS	2	ACCESSION	VERSION	KEYWORDS	SOURCE	ORGANISM		REFERENCE	AUTHORS	TITLE		JOURNAL